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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/630,296

07/30/2003

John Graeme Pepin

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EXAMINER

SAVAGE, JASON L

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ART UNIT

PAPER NUMBER

1775

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,296

Applicant(s)

PEPIN, JOHN GRAEME

Examiner

Jason L. Savage

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) 14-22 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-06-06 has been entered.

Election/Restrictions

Newly submitted claims 14-22 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Claims 14-17 and 20-22 are drawn to a magnetic thick film article comprising a magnetic thick film composition which is distinct from the magnetic thick film composition since they are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product, and the species are patentably distinct (MPEP § 806.05(j)). In the instant case, the intermediate product is deemed to be useful to make other than the final product such as by applying the composition to a substrate to form a composite article with a magnetic thick film on one surface and the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

Claims 18-19 are drawn to a method of forming an isotropic thick film comprising forming a thick film composition on a substrate which are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant the product could be used in a materially different process such as by forming the thick film forming composition into a thick film without applying the composition to a substrate such as claimed.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 14-22 have been withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1, 4-9, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Topfer et al. (Translated Article: Preparation and Properties of Nd-Fe-B Thick Layers for Magnetic Standards).

Topfer teaches a composition for forming a magnetic thick film comprising magnetic particles of NdFeB dispersed in an organic medium containing a polymer epoxy resin and solvent (p. 3, "Screen Printing").

Regarding the limitation that the polymer be selected from polyurethane or phenoxy, although Topfer only recites the use of epoxy resin as the polymer in the magnetic composition, it would have been within the purview of one of ordinary skill in the art to have recognized that other polymer materials could be suitable for in the magnetic composition of Topfer with a reasonable expectation of success. The substitution of a phenoxy polymer for the epoxy of Topfer would have been an obvious choice given that both are similar chemically.

Regarding the limitation that the particles in the magnetic thick film forming composition have isotropic characteristics in claim 1, the particles in in the film forming composition (emphasis added) of Topfer would meet the claim limitation. Topfer does not teach that the particles are subjected to any magnetic field prior to adding them to the composition (emphasis added). As such, the film forming composition of Topfer would meet the limitation of having isotropic characteristics as the film forming composition claimed by Applicant.

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Regarding the limitation in claim 4, Topfer teaches that the magnetic particles may be contained in the composition in an amount of 65% by weight (p. 4, "Results and Discussion").

Regarding the limitation in claim 5, although Topfer does not specifically recite the desired organic medium content in the composition, given the teaching that the magnetic particles are desirably contained in an amount of 65% by weight above, the organic medium content would likely be 35% by weight or below in the preferred embodiment taught by Topfer.

Regarding claims 6, 8-9 and 13, Topfer teaches that the composition may be applied to a substrate by screen printing (p. 3, top) which would meet the claim limitation of having a consistency suitable for screen printing and applying the composition to a substrate by a screen printing disposing means.

Regarding claim 7, Topfer teaches the composition is processed to remove the solvent.

Regarding claim 11, while Topfer teaches that a formed film is subjected to magnetization, Topfer does not teach that particles in the film forming composition (emphasis added) has been treated to orient the particles in any manner. As such, the film forming composition of Topfer would meet the limitation of being isotropic. Furthermore, regarding the limitation that the powders are selected from atomized or dry-milled powders, the claims are drawn to a product, not the method of making. Absent a teaching of the criticality or evidence showing how the claimed methods of forming the particles produce a powder that is materially distinct from the powder of the

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prior art, it does not provide a patentable distinction. Also, it would have been obvious to one of ordinary skill in the art to have selected powders formed from any known method including dry-milling with a reasonable expectation of success.

Claims 2-3, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Topfer et al. (Translated Article: Preparation and Properties of Nd-Fe-B Thick Layers for Magnetic Standards) as evidenced by ISAMM'02 (Program of the ISAMM'02 International Symposium on Advanced Magnetic Materials) and Benz et al. (Article: High-Energy-Product (Pr-Nd-Ce)FeB Magnets Produced Directly from Mixed-Rare-Earth-Oxide Feed for MRI Medical Imaging Applications).

Topfer teaches what is set forth above but is silent to the NdFeB magnetic material comprising other metals such as those claimed. However, it would have been within the purview of one of ordinary skill in the art to have recognized that additives of any metal that known to be suitable for use with NdFeB system materials could be employed in the magnetic composition of Topfer with a reasonable expectation of success. As evidenced by ISAMM'02 on pages 2 and 4, transition metals such as Co and Cr are known to be suitable for use with NdFeB system materials and as evidenced by Benz, it is known that Pr is suitable for use with NdFeB system materials and as such, the use of the claimed elements in the NdFeB system of Topfer would have been obvious. Furthermore, absent a teaching of the criticality of the additive metals, it would not provide a patentable distinction over the prior art.

It is well settled that the test of obviousness is not whether the features of one reference can be bodily incorporated into the structure of another and proper inquiry should not be limited to the specific structure shown by the references, but should be into the concepts fairly contained therein, and the overriding question to be determined is whether those concepts would suggest to one of ordinary skill in the art the modifications called for by the claims, *In re Van Beckum*, 169 USPQ 47 (CCPA 1971), *In re Bozek*, 163 USPQ 545 (CCPA 1969); *In re Richman*, 165 USPQ 509 (CCPA 1970); *In re Henley*, 112 USPQ 56 (CCPA 1956); *In re Sneed*, 218 USPQ 385 (Fed. Cir. 1983).

In response to the issue whether the reference is nonanalogous art, it has been held that the determination that a reference is from a nonanalogous art is twofold. First, one decides if the reference is within the field of the inventor's endeavor. If it is not, one proceeds to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved, *In re Wood*, 202 USPQ 171, 174. In the instant case, all of the cited references of Topfer, ISAMM'02 and Benz are and Barrow are generally drawn to magnetic materials of the Nd-Fe-B system.

Response to Arguments

Applicant's arguments filed 4-6-06 have been fully considered but they are not persuasive.

Applicant argues that the composition of Topfer would not meet the present claim limitations since a magnetic field is used to magnetize the particles of Topfer to orient

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the particles in one particular direction/orientation. Applicant argues that in the present invention, the particles as printed can be isotropic in nature. However, as was set forth in the advisory action of 1-31-06, Topfer does not teach that the particles in the film forming composition (emphasis added) have been treated to orient the particles in any manner. It is only after the composition has been formed into a film that magnetization is applied (p.5, bottom of the page). As such, the film forming composition (emphasis added) of Topfer would meet the limitation of being as isotropic as the film forming composition (emphasis added) claimed by Applicant.

It is also noted that Applicant's arguments with respect to the isotropic characteristics of the particles in the magnetic thick film composition is not commensurate in scope with claims 11-12.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Savage whose telephone number is 571-272-1542. The examiner can normally be reached on M-F 6:30-4:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Savage
4-12-06


ARCHENE TURNER
PRIMARY EXAMINER